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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,509	07/13/2005	Thomas Shawn Dewitz	TS1138US	1987
23632	7590	01/21/2009		
SHELL OIL COMPANY P O BOX 2463 HOUSTON, TX 772522463			EXAMINER TURNER, SONJI LUCAS	
			ART UNIT	PAPER NUMBER
			1797	
			MAIL DATE	DELIVERY MODE
			01/21/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,509	Applicant(s) DEWITZ ET AL.	
	Examiner SONJI TURNER	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - a. page 1, line 38 delete “aluminium” and replace with –aluminum—
 - b. page 2, par. 3 (and throughout specification)delete “stabiliser” and replace with –stabilizer—
 - c. page 8, line 19 the “preferably between 1,5 and 5,” is ambiguous; clarification is required
 - d. page 11, line 12 delete “rorating” and replace with –rotating—.
 - e. Appropriate correction is required.

Claim Status

2. Claims 1-5 and 7-15 are pending. Claim 6 is canceled.

Claim Rejections - 35 USC § 102

3. Claims 1, 9, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Fernandes ‘558 (US Patent 3,590,558).
4. Fernandes ‘558 teaches a swirl separator (10) with a tubular housing (24), an axial inlet (46) with a swirl imparting means (44), a solid outlet opening (89) at the opposite end of the housing, a co-axial gas outlet conduit (32), a vortex extender pin (74) along the axis of the tubular housing, and an annular opening (68) about the vortex extender pin. The word *about* is interpreted, as taught in Fernandes ‘558, to mean near, or in the region of, the vortex extender pin. Additionally, Fernandes ‘558 discloses at col. 3, lines 43-46 a swirl means positioned such that it decreases the swirl motion of the gas discharged from the gas outlet conduit, and the inlet and gas outlet are at opposite ends of the housing (figs. 1-4; col. 3, lines 27-70; col. 6, lines 1-18, 42-50, 58-70).

Claim Rejections - 35 USC § 103

5. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernandes '558 as applied to claim 1 above, and further in view of Cordes '401 (US Patent 3,675,401).

6. The teaching of Fernandes '558 is set forth above with claim 1. Fernandes '558 does not teach a pin extending along the axis of the tubular housing at various lengths. Cordes '401 does teach a pin (19, 23, 20, 21, 22, 24) present along 100% of the axis of the tubular housing (figs. 1-2; col. 3, lines 28-37). As such, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use the pin disclosed in Fernandes '558 to prevent disruption of the gas flow patterns in the separator. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

7. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as set forth above with the teachings of Fernandes '558 and Cordes '401. Additionally, Fernandes '558 discloses at col. 3, lines 43-46 a swirl means positioned such that it decreases the swirl motion of the gas discharged from the gas outlet conduit.

8. Claims 7 and 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Fernandes '558 as applied to claim 1 above, and further in view of Barnes '709 (US Patent 5,690,709). The teachings of Fernandes '558 are set forth above but does not teach multi separator with a plurality of parallel separators or a process with the content of solids as recited in instant claim 8. Barnes '709 does teach such as shown in figure 3 and at col. 1, lines 24-35. It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use separator of Fernandes '558 in the multi separator of Barnes '709 for the purpose processing the gas-solid feed stream for optimal reduction of the solids content at the quantities recited in

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instant claim 8. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

9. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernandes '558 as set forth above with claim 5.

10. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernandes '558 as set forth above.

Response to Remarks/Arguments

11. Applicant's remarks/arguments, see page 5, filed October 31, 2008, with respect claim 3 have been fully considered and are persuasive. The rejection under 35 U.S.C. § 112 of claim 3 has been withdrawn. However, applicant's arguments with respect to claims 1, 9, and 12 have been considered but are moot in view of the new ground(s) of rejection. The solids outlet opening (89) is positioned at a second end of the housing, and the solids outlet opening comprises an annular opening (68) about, or near, the vortex extender pin as taught in Fernandes.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonji Turner whose telephone number is 571-272-1203. The examiner can normally be reached on Monday - Friday, 10:00 am – 2:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

st

1/15/09

/DUANE SMITH/

Supervisory Patent Examiner, Art Unit 1797

1-16-09